

LISTING OF CLAIMS

The claims in this listing replace all previous versions, and listings, of claims in this application.

1. (Currently Amended) A multi-type air conditioner comprising:

an outdoor unit installed outdoors and ~~in an outdoor,~~ including a compressor, a refrigerant flow controlling part connected to a discharge end of the compressor ~~for guiding~~ and configured to guide the refrigerant proper to operation conditions selectively, and an outdoor heat exchanger connected to the refrigerant flow controlling part;

a plurality of indoor units each installed in a room and having an indoor heat exchanger and an electronic expansion valve having one end connected to one end of the indoor heat exchanger;

~~a plurality of,~~ at least two[[,]] distributors between the outdoor unit and the plurality of indoor units for improving installation freedom of the plurality of indoor units, and configured to selectively guiding guide refrigerant from the outdoor unit to the plurality of indoor units proper to operation conditions, ~~and guiding to guide~~ the refrigerant passed through the indoor units to the outdoor unit again, each of the distributors further configured to distribute the refrigerant to at least two of the plurality of indoor units; and

a shut-off device ~~for shutting~~ configured to selectively shut off introduction of the refrigerant into ~~the distributors connected to inoperative indoor units~~ each distributor.

wherein the shut-off device shuts off the refrigerant into the each distributor when all of the indoor units connected to each distributor are inoperative.

2. (Currently Amended) The multi-type air conditioner as claimed in claim 1, wherein the ~~refrigerant introduction shutoff~~ shut-off device is an ON/OFF valve.

3. (Currently Amended) The multi-type air conditioner as claimed in claim 1, wherein the plurality of distributors include supercooling devices respectively disposed on pipelines through which high pressure liquid refrigerant flows therein ~~for supercooling and configured to supercool~~ the high pressure liquid refrigerant.

4. (Currently Amended) The multi-type air conditioner as claimed in claim 3, wherein the supercooling device includes[[:]];:

a leading pipeline branched from a fore end of a pipeline in one of the plurality of distributors through which the high pressure liquid refrigerant flows ~~therethrough;~~

an expander on the leading pipeline ~~for expanding~~ and configured to expand the high pressure liquid refrigerant into low pressure gas refrigerant[[:]];:

first leading branch pipelines each having one ~~ends~~ end respectively branched from the leading pipeline, the quantity of first leading branch pipelines being as many as a number the quantity of the plurality of distributors[[:]];:

a heat exchanger part in each of the ~~distributor~~ distributors and having one

end connected to the other end of the first leading pipeline, the heat exchanger configured to sustain ~~for sustaining~~ a supercooled state of refrigerant in the high pressure liquid refrigerant connection pipeline~~[[,]]~~; and

a second leading branch pipeline ~~for guiding~~ configured to guide low pressure gas refrigerant passed through the heat exchanger in each of the distributors to the low pressure gas refrigerant connection pipeline to be introduced into the compressor.

5. (Currently Amended) The multi-type air conditioner as claimed in claim 4, wherein the supercooling device further includes a refrigerant shutoff part on each of the first leading branch ~~pipelines~~ pipeline.

6. (Currently Amended) The multi-type air conditioner as claimed in claim 5, wherein the refrigerant shutoff part is an ON/OFF valve ~~for opening/closing~~ configured to open and/or close proper to operation conditions.

7. (Currently Amended) The multi-type air conditioner as claimed in claim 4, wherein the heat exchanger part is in contact with pipelines through which the high pressure liquid refrigerant flows therein.

8. (Currently Amended) The multi-type air conditioner as claimed in claim 7, wherein the heat exchanger part includes a pipeline passed through an inside of the pipeline through which the high pressure liquid refrigerant flows therein.

9. (Previously Presented) The multi-type air conditioner as claimed in claim 4, wherein the expander is an electronic expansion valve.

10. (Currently Amended) The multi-type air conditioner as claimed in claim 1, wherein the outdoor unit further includes[[,]]:

a first connection pipeline having one end connected to a discharge end of the compressor and the other end connected to the distributor with the refrigerant flow controlling part and the outdoor heat exchanger connected in succession between the two ends[[,]];

a second connection pipeline connected to the first connection pipeline connected between the refrigerant flow controlling part and the discharge end of the compressor, ~~for guiding~~ and configured to guide compressed refrigerant to the distributors directly[[,]] and

a third connection pipeline connected between the suction end of the compressor and the distributors, and ~~has~~ having a branch pipeline connected to one end of the refrigerant flow controlling part, ~~for guiding~~ the third connection pipeline configured to guide low pressure gas refrigerant to the compressor.

11. (Currently Amended) The multi-type air conditioner as claimed in claim 10, wherein the distributor includes[[,]]:

a guide piping system ~~for guiding~~ configured to guide the refrigerant introduced thereto through the first connection pipeline or the second connection

pipeline in the outdoor unit to the indoor units, and the refrigerant from the indoor units to the first connection pipeline or to the third connection pipeline in the outdoor unit proper to operation conditions[.]; and

a valve bank on the guide piping system ~~for controlling~~ and configured to control refrigerant flow such that the refrigerant flows in/out of the indoor units, selectively proper to operation conditions.

12. (Currently Amended) The multi-type air conditioner as claimed in claim 11, wherein the guide piping system includes[.];

a high pressure liquid refrigerant connection pipeline having one end connected to the first connection pipeline in the outdoor unit,

high pressure liquid refrigerant branch pipelines each having one ~~ends~~ end branched from the high pressure liquid refrigerant connection pipeline, the quantity of one ends being as many as ~~a number~~ the quantity of the indoor units, and the other ~~ends~~ end of each of the high pressure liquid refrigerant branch pipelines connected to one of the other ends of the indoor electronic expansion valves, respectively[.];

a high pressure gas refrigerant connection pipeline having one end connected to the second connection pipeline in the outdoor unit directly[.];

high pressure gas refrigerant branch pipelines each having one ~~ends~~ end branched from the high pressure gas refrigerant connection pipeline, the quantity of one ends being as many as ~~the number~~ quantity of the indoor units, and the other ~~ends~~ end of each of the high pressure gas refrigerant branch pipelines

directly connected to one of the other ends of the indoor heat exchangers of respective indoor units, respectively[[:]];:

a low pressure gas refrigerant connection pipeline having one end connected to the third connection pipeline in the outdoor unit directly[[:]]; and

low pressure gas refrigerant branch pipelines each having one ~~ends~~ end branched from the low pressure gas refrigerant connection pipeline, the quantity of low pressure gas refrigerant branch pipelines being as many as the ~~number~~ quantity of indoor units, and the other ~~ends~~ end of each of the low pressure gas refrigerant branch pipelines connected to one of the other ends of the indoor heat exchangers of the respective indoor units to which the high pressure gas refrigerant branch pipelines are connected ~~thereto~~, respectively.

13. (Currently Amended) The multi-type air conditioner as claimed in claim 12, wherein the valve bank includes[[:]]:

selection valves on the high pressure gas refrigerant branch pipelines and the low pressure gas refrigerant branch pipelines, the selection valves configured to close ~~for closing~~ the valves on the high pressure gas refrigerant branch pipelines and ~~opening~~ to open the valves on the low pressure gas refrigerant branch pipelines in a case of room cooling, and ~~opening/closing~~ further configured to open and/or close the valves in an opposite manner in a case of room heating, for controlling refrigerant flow.

14. (Currently Amended) A multi-type air conditioner comprising:

an outdoor unit installed outdoors and in an outdoor, including a compressor, a four way valve connected to a discharge end of the compressor and configured to guide ~~for guiding~~ the refrigerant proper to operation conditions selectively, and an outdoor heat exchanger connected to the four way valve;

a plurality of indoor units each installed in a room and having an indoor heat exchanger and an electronic expansion valve having one end connected to one end of the indoor heat exchanger;

a plurality of distributors between the outdoor unit and the plurality of indoor units for improving installation freedom of the plurality of indoor units, and configured to ~~selectively guiding~~ guide refrigerant from the outdoor unit to the plurality of indoor units proper to operation conditions, ~~and guiding to guide~~ the refrigerant passed through the indoor units to the outdoor unit again, each of the distributors distributing the refrigerant to at least two of the plurality of indoor units and having a supercooling device on a pipeline through which the high pressure liquid refrigerant flows therein, the supercooling device configured to sustain ~~for sustaining~~ a supercooled state of the high pressure liquid refrigerant[[,]]; and

an ON/OFF valve ~~for shutting~~ configured to selectively shut off introduction of the refrigerant into ~~the distributors connected to inoperative indoor units~~ each distributor,

wherein the ON/OFF valve shuts off the refrigerant into the each distributor when all of the indoor units connected to each distributor are inoperative.

15. (Currently Amended) The multi-type air conditioner as claimed in claim 14, wherein the supercooling device includes[[:]]

a leading pipeline branched from a fore end of a pipeline in one of the plurality of distributors through which the high pressure liquid refrigerant flows; ~~therethrough,~~

an expander on the leading pipeline ~~for expanding~~ and configured to expand the high pressure liquid refrigerant into low pressure gas refrigerant[[:]];

first leading branch pipelines each having one ~~ends~~ end respectively branched from the leading pipeline, the quantity of first leading branch pipelines being as many as ~~a number~~ the quantity of the plurality of distributors[[:]];

a heat exchanger part in each of the ~~distributor~~ distributors, each heat exchanger having one end thereof connected to the other end of the first leading pipeline ~~for sustaining~~ and configured to sustain a supercooled state of refrigerant in the high pressure liquid refrigerant connection pipeline[[:]]; and

a second leading branch pipeline ~~for guiding~~ configured to guide low pressure gas refrigerant passed through the heat exchanger in each of the distributors to the low pressure gas refrigerant connection pipeline to be introduced into the compressor.

16. (Currently Amended) The multi-type air conditioner as claimed in claim 15, wherein the supercooling device further includes an ON/OFF valve on the first leading branch pipeline, the ON/OFF valve configured to shut ~~for shutting-off~~

the refrigerant.

17. (Currently Amended) The multi-type air conditioner as claimed in claim 16, wherein the heat exchanger part is a tubular pipeline passed through an axis direction of an inside of the pipeline through which the high pressure liquid refrigerant flows therein.